CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method for analyzing a media path in a packet switched network, comprising:

providing media trace packets ~~having a data header field assigned a same priority value~~ configured to use the same application protocol as actual media payload packets to be sent along the media path and further configured to match, at a protocol layer other than that of the application protocol, a priority indicator to be provided by the actual media payload packets to specify a desired one of a plurality of priority levels available in the network;

varying a Time To Live (TTL) value in the media trace packets to intentionally cause faults at intermediate nodes in the media path; and

analyzing fault notices received from the intermediate nodes in the media path caused by the media trace packets.

2. (Currently Amended) The method according to claim 1 including ~~formatting the~~ providing media trace packets ~~as a~~ configured to use Real Time Protocol (RTP) ~~payload packet that travel starting with the same priority value along the same media path as RTP payload packets containing media content, the same priority value being assigned by an Internet Protocol (IP) header field~~ as the application protocol and further configured to use Differentiated Services Code Point (DSCP) bits as the priority indicator.

3. (Previously Presented) The method according to claim 1 including:

conducting a media signaling protocol that establishes the media path between a source and destination endpoint;

using a same media header format for the media trace packets and media payload packets; and

setting a first set of TTL values in the media trace packets to a low enough value to cause a fault condition in one of the intermediate modes in the media path such that a portion of each

media trace packet causing the fault condition is returned in a corresponding reject notice to the source endpoint.

4. (Previously Presented) The method according to claim 3 including setting a second set of TTL values so that at least some of the media trace packets reach the destination endpoint.

5. (Currently Amended) The method according to claim 4 including setting a member bit in the media trace packets that cause the destination endpoint to immediately generate, using a Real Time Control Protocol (RTCP), a media path analysis report for the media trace packets.

6. (Canceled)

7. (Original) The method according to claim 5 including determining whether or not to transmit a media stream over the media path according to contents of the media path analysis report.

8. (Currently Amended) The method according to claim 1 including causing the media trace packets to play out low volume noise when received by a destination endpoint by inserting the low volume noise into media payload fields of the media trace packets before sending the media trace packets along the media path, said low volume noise inserted at a quantity creating uniformly-sized trace packets suitable for thwarting traffic analysis.

9. (Previously Presented) The method according to claim 1 including:

setting a first TTL value in a first set of the media trace packets that cause a first intermediate node in the media path to reject the first set of media trace packets and send back a first rejection notice; and

setting a second larger TTL value in a second set of the media trace packets that allow the first intermediate node to forward the second set of the media trace packets while causing a

second intermediate node in the media path to reject the second set of the media trace packets and send back a second rejection notice.

10. (Withdrawn) A network processing device, comprising:

a processor establishing a media session over an Internet Protocol (IP) network and modifying a Time To Live (TTL) value in respective sets of media trace packets that intentionally cause rejection by corresponding respective intermediary nodes used in the media session where transmittal of the respective sets of media trace packets is selectively subject to rate-limiting control.

11. (Withdrawn) The network processing device according to claim 10 wherein the TTL value is automatically decremented by each intermediary node receiving any one of the media trace packets and any intermediary node decrementing the TTL value to zero automatically rejects the any one media trace packet and sends back a rejection notice.

12. (Withdrawn) The network processing device according to claim 10 wherein the processor receives a rejection response for any rejected one of the media trace packets and either modifies a media path for the media session or modifies the TTL value according to the rejection response.

13. (Withdrawn) The network processing device according to claim 10 wherein the processor sends out media payload packets containing an actual media payload with unmodified TTL values, the processor interjecting the media trace packets in the media session with the media payload packets when a trigger event is detected.

14. (Withdrawn) The network processing device according to claim 13 wherein the processor identifies the trigger event from a Real Time Control Protocol (RTCP) report.

15. (Withdrawn) The network processing device according to claim 10 wherein the processor modifies the TTL values in the media trace packets that are formatted as media

payload packets that contain no actual media payload but rather contain an artificial media payload of low volume noise.

16. (Withdrawn) The network processing device according to claim 10 wherein the media session is a Real Time Protocol (RTP) media session and the media trace packets are formatted as RTP packets.

17. (Withdrawn) An intermediary node in an Internet Protocol (IP) media session, comprising:

a processor configured to receive media trace packets during a media session containing Time To Live (TTL) values intentionally set so the media trace packets are discarded prior to being received by a destination endpoint in the media session, the processor decrementing the TTL values, discarding the media trace packets when the decremented TTL values are zero, and sending out a rejection notice for any discarded media trace packets where transmittal of respective rejection notices is selectively subject to rate-limiting control.

18. (Withdrawn) The intermediary node according to claim 17 wherein the media trace packets are Real Time Protocol (RTP) packets.

19. (Withdrawn) The intermediary node according to claim 18 wherein the processor also receives conventional RTP packets during the same media session that contain an actual RTP media payload and large enough TTL values to allow the RTP packets to reach the destination endpoint, the processor decrementing the TTL values in the conventional RTP packets and forwarding the conventional RTP packets toward the destination endpoint.

20. (Withdrawn) The intermediary node according to claim 18 wherein the RTP packets containing TTL values enable passage through a firewall between a source endpoint and a destination endpoint for the media session while also immediately causing selectively the destination endpoint to generate a QoS-related notice.

21. (Currently Amended) A system for analyzing a media path in a packet switched network, comprising:

means for providing media trace packets ~~having a data header field assigned the same priority value~~ configured to use the same application protocol as actual media payload packets to be sent along the media path and further configured to match, at a protocol layer other than that of the application protocol, a priority indicator to be provided by the actual media payload packets to specify a desired one of a plurality of priority levels available in the network;

means for varying a Time To Live (TTL) value in the media trace packets to intentionally cause faults at intermediate nodes in the media path; and

means for analyzing fault notices received from the intermediate nodes in the media path caused by the media trace packets.

22. (Currently Amended) A system according to claim 21 including means for ~~formatting the~~ providing media trace packets ~~as a~~ configured to use Real Time Protocol (RTP) ~~payload packet that travel starting with the same priority value along the same media path as RTP payload packets containing media content, the same priority value being assigned by an Internet Protocol (IP) header field~~ as the application protocol and further configured to use Differentiated Services Code Point (DSCP) bits as the priority indicator.

23. (Previously Presented) A system according to claim 21 including:

means for conducting a media signaling protocol that establishes the media path between a source and destination endpoint;

means for using a same media header format for the media trace packets and media payload packets; and

means for setting a first set of TTL values in the media trace packets to a low enough value to cause a fault condition in one of the intermediate modes in the media path such that a portion of each media trace packet causing the fault condition is returned in a corresponding reject notice to the source endpoint.

24. (Previously Presented) A system according to claim 23 including means for setting a second set of TTL values so that at least some of the media trace packets reach the destination endpoint.

25. (Currently Amended) A system according to claim 24 including means for setting a member bit in the media trace packets that cause the destination endpoint to immediately generate, using a Real Time Control Protocol (RTCP), a media path analysis report for the media trace packets.

26. (Canceled)

27. (Original) A system according to claim 25 including means for determining whether or not to transmit a media stream over the media path according to contents of the media path analysis report.

28. (Previously Presented) A system according to claim 21 including means for causing the media trace packets to play out low volume noise when received by a destination endpoint by inserting the low volume noise into media payload fields of the media trace packets before sending the media trace packets along the media path.

29. (Previously Presented) A system according to claim 21 including:

means for setting a first TTL value in a first set of the media trace packets that cause a first intermediate node in the media path to reject the first set of the media trace packets and send back a first rejection notice; and

means for setting a second larger TTL value in a second set of the media trace packets that allow the first intermediate node to forward the second set of the media trace packets while

causing a second intermediate node in the media path to reject the second set of the media trace packets and send back a second rejection notice.

30. (Currently Amended) A computer readable medium having stored thereon computer executable instructions for analyzing a media path in a packet switched network that, when executed by a processor, causes the processor to perform the method of:

providing media trace packets ~~having a data header field assigned a same priority value~~ configured to use the same application protocol as actual media payload packets to be sent along the media path and further configured to match a priority indicator to be provided by the actual media payload packets to specify a desired one of a plurality of priority levels available in the network;

varying a Time To Live (TTL) value in the media trace packets to intentionally cause faults at intermediate nodes in the media path; and

analyzing fault notices received from the intermediate nodes in the media path caused by the media trace packets.

31. (Currently Amended) A computer readable medium according to claim 30 including ~~formatting the~~ providing media trace packets ~~as a~~ configured to use Real Time Protocol (RTP) ~~payload packet that travel starting with the same priority value along the same media path as RTP payload packets containing media content, the same priority value being assigned by an Internet Protocol (IP) header field~~ as the application protocol and further configured to use Differentiated Services Code Point (DSCP) bits as the priority indicator.

32. (Previously Presented) A computer readable medium according to claim 30 including:

conducting a media signaling protocol that establishes the media path between a source and destination endpoint;

using a same media header format for the media trace packets and media payload packets; and

setting a first set of TTL values in the media trace packets to a low enough value to cause a fault condition in one of the intermediate modes in the media path such that a portion of each media trace packet causing the fault condition is returned in a corresponding reject notice to the source endpoint.

33. (Previously Presented) A computer readable medium according to claim 32 including setting a second set of TTL values so that at least some of the media trace packets reach the destination endpoint.

34. (Currently Amended) A computer readable medium according to claim 33 including setting a member bit in the media trace packets that cause the destination endpoint to immediately generate, using a Real Time Control Protocol (RTCP), a media path analysis report for the media trace packets.

35. (Canceled)

36. (Original) A computer readable medium according to claim 34 including determining whether or not to transmit a media stream over the media path according to contents of the media path analysis report.

37. (Previously Presented) A computer readable medium according to claim 30 including causing the media trace packets to play out low volume noise when received by a destination endpoint by inserting the low volume noise into media payload fields of the media trace packets before sending the media trace packets along the media path.

38. (Previously Presented) A computer readable medium according to claim 30 including:

setting a first TTL value in a first set of the media trace packets that cause a first intermediate node in the media path to reject the first set of the media trace packets and send back a first rejection notice; and

setting a second larger TTL value in a second set of the media trace packets that allow the first intermediate node to forward the second set of the media trace packets while causing a second intermediate node in the media path to reject the second set of the media trace packets and send back a second rejection notice.